Claims:

1. (Currently Amended) A method of assembling a frame structure of a SDH signal at a hierarchy level N, comprising:

receiving a hierarchically multiplexed administrative unit AU-n comprising an AU-n payload and an AU-n pointer;

~~translating~~ transforming said AU-n into a tributary unit TU-n having a TU-n payload and a TU-n pointer such that said AU-n becomes said TU-n, said transforming including ~~by putting~~ transforming said AU-n payload of said AU-n into the TU-n payload of said TU-n and transforming said AU-n pointer of said AU-n into said TU-n pointer of said ~~the~~ TU-n; and

hierarchically multiplexing said TU-n into said frame structure, where $n \geq 3$, and gives the granularity of said SDH signal, and said AU-n pointer transformed into said TU-n pointer provides the beginning of said TU-n payload with respect to said frame structure.

2. (Previously presented) A method as claimed in claim 1, wherein said step of translating comprises:

translating said AU-n payload into a TU-n payload; and

transforming said AU-n pointer into a TU-n pointer and aligning said AU-n payload into said TU-n based on said TU-n pointer.

3. (Original) A method as claimed in claim 1, wherein said step of hierarchically multiplexing comprises:

mapping said TU-n into a tributary unit group TUG-n;

hierarchically multiplexing said TUG-n into a higher order TUG-k;

mapping said TUG-k into a higher order virtual container VC-k of same hierarchical level;

aligning said higher order virtual container into a AU-k by providing a AU-k pointer;

mapping said AU-k into a administrative unit group AUG-k and

assembling said frame structure from said AUG-k,

where $k \geq n$.

4. (Previously presented) A method as claimed in claim 2, wherein said step of translating said AU-n payload comprises:

mapping the user information from said AU-n payload into said TU-n payload field; and

providing fixed stuff bits whenever the size of said TU-n payload field is larger than the area occupied by said user information.

5. (Original) A method as claimed in claim 3, wherein said step of hierarchically multiplexing said TUG-n into a TUG-k comprises:

(a) mapping said TU-n into a TUG-n;

(b) multiplexing said TUG-n into a VC-k;

(c) mapping VC-k into a TU-k by adding a POH field corresponding to a hierarchical level k;

(d) mapping said TU-k into a TUG-k; and

(e) repeating steps (a) to (e) to the hierarchy level N.

6. (Original) A method as claimed in claim 2, wherein n=3 and N=4 for obtaining a hierarchically multiplexed STM-4.

7. (Original) A method as claimed in claim 6, wherein said step of hierarchically multiplexing comprises:

mapping said TU-3 into a tributary unit group TUG-3;

hierarchically multiplexing said TUG-3 into a TUG-5;

mapping said TUG-5 into a higher order virtual container VC-5 of same hierarchical level;

aligning said higher order virtual container into a AU-5 by providing a AU-5 pointer;

mapping said AU-5 into a administrative unit group AUG-N; and

assembling said frame structure from said AUG-4 group.

8. (Original) A method as claimed in claim 2, wherein n=4 and N=4 for obtaining a hierarchically multiplexed STM-4.

9. (Original) A method as claimed in claim 8, wherein said step of hierarchically multiplexing comprises:

mapping said TU-4 into a tributary unit group TUG-4;

hierarchically multiplexing said TUG-4 into a TUG-5;

mapping said TUG-5 into a higher order virtual container VC-5 of same hierarchical level;

aligning said higher order virtual container into a AU-5 by providing a AU-5 pointer;

mapping said AUG-5 into a administrative unit group AUG-N; and

assembling said frame structure from said AUG-4 group.

10. (Currently Amended) A method of assembling a frame structure of a SDH signal comprising:

receiving a hierarchically multiplexed administrative unit AU-n-mc comprising a concatenated AU-n-mc payload and an AU-n-mc pointer;

~~translating~~ transforming said AU-n-mc to a tributary unit TU-n-mc having a TU-n-mc payload and a TU-n-mc pointer such that said AU-n-mc becomes said TU-n-mc, said transforming including transforming said AU-n-mc payload of said AU-n-mc into the TU-n-mc payload of said TU-n-mc and transforming ~~by putting~~ said AU-n-mc pointer of said AU-n-mc into ~~the~~ said TU-n-mc pointer of said TU-n-mc; and

hierarchically multiplexing said TU-n-mc into said frame structure, where $n \geq 3$, and give the granularity of said speed payload, m is the level of concentration and said AU-n-mc pointer transformed into said TU-n-mc pointer

provides the beginning of said TU-n-mc payload with respect to said frame structure.

11. (Currently Amended) A method of reducing the number of AU pointers of a very high speed synchronous transport signal STM-N with AU-n granularity, an AU-n unit having an AU pointer and an AU payload, the method comprising:

for each AU-n unit, ~~putting~~ moving said AU-n pointer from the overhead field into said AU payload;

~~translating~~ transforming said AU-n payload having the AU-n pointer placed therein into a TU-n payload of a tributary unit TU-n such that the AU-n becomes said TU-n; and

hierarchically multiplexing said TU-n into a frame structure.

12. (Previously Presented) A hierarchically multiplexed signal for transport over a multiplex section of a synchronous network, comprising:

a payload field with a coarse AU granularity corresponding to the granularity of a higher order tributary, said payload field carrying a plurality of fine granularity AU pointers hidden in a TU pointer area; and

a section overhead field including a coarse granularity AU pointer.

13. (Original) A signal as claimed in claim 12, wherein said higher order tributary has a minimum size corresponding to an STM-4.

14. (Original) A signal as claimed in claim 13, wherein said higher order tributary has a size corresponding to one of an STM-16, STM-64 and STM-256.